SNOW, Herbert.
1893

The Path of Improvement in Cancer Treatment.

THE PATH OF IMPROVEMENT IN CANCER TREATMENT,

BY

HERBERT SNOW, M.D. Lond., &c.,
Surgeon to the Cancer Hospital.

[*Reprinted (with additions) from the* Medical Press and Circular, *June 28th*, 1893.]

Cancer has long been regarded as the opprobrium of surgery, and I fear there is little doubt that the heroic new departures in surgical procedure of which we now not seldom read, will in the main rather intensify than lessen our reproach among men. Yet I cannot help thinking that were certain definite principles and axioms in the pathology, diagnosis, and treatment of malignant disease more clearly taught in the schools, and more accurately appreciated by the profession than has been hitherto the case, we should soon witness a corresponding improvement in results, an enhanced confidence on the part of the general public, with a proportionately less eager resort to the nostrums of quacks. I purpose here briefly to set forth a few of these.

I.—How does Cancer Kill?

A complete reply to this question would involve a discussion of numerous technical details, which need not here be referred to. Sufficient for the present purpose it is to point

out that, in those cases which especially claim the care of the surgeon—life is terminated much more often and in much greater degree by the metastatic offshoots than by the primary lesion, or by any consequences directly arising therefrom. That a malignant tumour thus more often kills indirectly than directly, by reason of the infective and autositic properties which its cell-elements have acquired, and by the ready transmission of these *per* the blood or lymph to distant parts. Of old the "recurrence" of cancer was attributed to its constitutional origin. That view has been dispelled by the advances of modern pathology, among which, by reason of its important practical bearings, I would take leave to mention my discovery of the insidious marrow-infection which accompanies ordinary breast-carcinoma. We now know that every species of cancerous neoplasm commences in a limited tissue area, whence contagious particles are transmitted by definite "infection-paths," which can nearly always be predicted.

From this principle may be deduced significant practical corollaries. First, that axiom upon which I conceive the future improvement of cancer-surgery most of all to hinge; *of removing all the dangerous lymph-glands in the "infection-path" of a Carcinoma or Epithelioma before they have had time to undergo increase in bulk.* Thus the fatal progress of the infective lesion along its natural track is intercepted; and complete extirpation will probably be effected. We should never attack an epitheliomatous tongue or lip, unless in a very advanced stage, without seeking also to remove the glands certain to be already infected, viz., those upon the anterior edge of the submaxillary serous gland, when the lip or fore-part of the tongue is diseased; the cervical, opposite to the angle of the lower jaw, when the hinder regions of the tongue are first affected. We should only in rare cases excise a carcinomatous breast, without simultaneously evacuating the corresponding axilla. A melanotic or epithelial sore on the

lower extremities or labia, should enjoin simultaneous attention to the surface lymph-glands in the inguinal region on the same side, and so on.

If, on the other hand, we wait until the lymph-organs in question have undergone appreciable enlargement, we may be reasonably certain that the infection has already passed to other glands beyond our reach, and will eventually reappear (recur). Gland-enlargement is a relatively *late stage;* we have a previous one of tenderness merely, and before that of insidious deposit not attended by symptoms. Each of these in carcinoma lasts several weeks. Needless to point out that from the lymphatic system germs eventually reach the blood. *To excise with the usual display a malignant primary tumour, when we neglect the secondary deposits which we know must have already ensued, is a sham operation, not a real one.*

Again, it is commonly of more consequence to the individual to remove these secondary deposits than to take away the primary cancer, even when no more than immunity from future suffering, and transient prolongation of life can be hoped for. The evacuation of the axilla with a breast carcinoma serves effectually to preclude that very distressing symptom, "brawny œdema of the arm," due to lymph-stasis, combined with constriction of the axillary vein by a ring of cancerous parenchyma in the lymphatics. The suffering attendant upon neglected epithelial deposit in the cervical lymph glands of a physically vigorous man must be in everyone's knowledge. The primary lesion of *Melanotic Cancer of the Integument* (in the majority of instances an epithelial disease generated in the deeper layers of the Malpighian rete), is commonly to the last a small ulcer or warty growth of the most insignificant dimensions. It can be radically extirpated, as a rule, without difficulty, and without the least fear of local "recurrence," though too often the disease process is carried on to its fatal end by means of the previously infected lymph glands (see

cases re-published in "Cancers and the Cancer Process," p. 365).

The routine operative treatment of cancers is greatly to be deprecated. *Every single case should be scrupulously dealt with on its own merits*, and not on any universal rule: with regard to numerous points of detail, such as the pathological species of the disease, the tissue this is most prone to infect, the idiosyncracies of the patient, &c.*

II.—Considerations on Early Diagnosis.

It follows from the preceding that if we seek surgically to extirpate—that is to cure—cancer beyond the possibility of eventual re-growth, we must needs learn to recognise malignant disease, either before secondary infection has been established, or before it has advanced to any considerable distance from the site of origin. The diagnosis is easy enough when the lesion is of old standing, and is then practically useless; to be of real value it must be effected in the incipient stage.

The subjective and objective signs, as laid down in ordinary text-books, pertain rather to the former period than to the latter, so are of but partial avail. What is really wanted is *far greater stress than has hitherto been laid on à priori considerations*, so that we may be, as it were, on our guard against malignant processes, may know who is a likely subject for cancer, and who the reverse.

In the work above quoted I have attempted to constitute a novel group of cancerous neoplasms, derived from embryonic vestiges, not perfectly effaced. These, which I have termed *Blastomata* (from βλαστος, germ), appear for the most part in childhood. They constitute a numerical minority of the total cancer cases, so do not affect the propositions here put forth in respect of the ordinary malignant disease of adults. Between

---

* These points are discussed at length in my work on *The Re-appearance of Cancer and its Prevention.*

these congenital neoplasms and the cancer of later life there is a great pathological gulf fixed. With the exception of this anomalous and exceptional section, cancer is emphatically limited to persons who are growing old. Cancerous males are generally past 40; females with breast carcinoma are seldom younger than 38; those with uterine cancer not often under 34. The average cancer age is 38-60 years, and begins a few years sooner for women than for men. Thus, persons who have attained this period of life are on that ground alone predisposed to malignancy. Heredity, it may be remarked, is an element which is much more likely to mislead in diagnosis than the reverse. In seventeen years' special experience I have learnt that a person who comes to me with a strong family history of cancer is much more likely to be suffering from some innocent ailment than from this dreaded scourge.

The mammæ and uterus of women, the mouth-cavity of men, are the elective seats of malignancy in the two sexes, and derangements here apparent during the cancer age, therefore, demand special attention. People, male or female, who have undergone conspicuous impairment of general health, and loss of vitality from any cause whatever, are most liable to cancer-developments. The female organs referred to undergo a normal process of devolution or obsolescence, and anything which interferes to hinder this is the fruitful parent of malignant growths. In this way mental anxiety and trouble are the common immediate forerunners of mammary and uterine carcinomata; so exhausting illness of any kind (I have known several cases immediately consequent upon influenza); specially toilsome occupations, such as that of the laundress. The present sad mortality from uterine cancer is largely preventable.

Such is the natural tendency in age, and in the degenerating female organs to cancer, that after the 38 years' period *any tumour in the mammæ, whether previously noticed or then*

appearing for the first time, becomes sooner or later associated with truly cancerous phenomena. Solid connective tissue growths enclosing gland-acini (Adeno-fibroma, Cystic fibroma), are thus always of serious import. Even a simple cyst (sometimes a dilated duct, more often a dilated acinus), quiescent for some years, ends either by developing "intra-cystic vegetations" from its walls, or by irritating the contiguous acini into malignant proliferation. These vegetations are most frequently carcinomatous ;* a less common form consists of embryonic connective tissue (Spindle-celled Sarcoma). A few are composed of well organised fibrous tissue, non-malignant, but always with a tendency to become more embryonic, and so sarcomatous. Thus it should be a maxim of the practical surgeon to regard every mammary neoplasm in an elderly woman as either an actual or a potential cancer.

Young people are particularly prone to lymph-gland enlargement upon any slight provocation, most commonly of septic character ; the old rarely suffer in this way. Thus, any such feature after the age of 40, particular when subsequent to mechanical violence, and when no septic cause can be detected in the vicinity, is strongly suggestive of primary malignancy in these organs (*Lympho-carcinoma*). Both affections begin insidiously and painlessly. The latter is diffused very rapidly, and is one of the most virulent of cancers. Should there be suspicion of malignancy, which in an elderly person must always be the case under the conditions mentioned, an exploratory incision should be performed with the least possible delay ; thus alone can life be saved.†

---

* The carcinomatous variety of intra-cystic vegetation is sometimes improperly described as "Duct Cancer." It has no necessary connection with the ducts.

† In these distressing cases the enlarged glands are almost invariably painted with iodine for weeks or months, until all prospect of curative extirpation has been sacrificed. That fatal error would hardly occur, were the principle above italicised borne in mind.

III.—Importance of certain Pathological Considerations.

The foremost consideration, from a practical point of view, is the escape of the adjoining lymph-glands from infection per the lymphatic vessels, in true sarcoma, whereas in carcinoma and epithelioma, these organs very early become the seat of deposit. If with a malignant growth developed from connective tissue corpuscles we find glands in its vicinity enlarged, we know that there is general blood infection, and that metastases are also present in the viscera, consequently that an operation will have no curative efficacy. Hence, in sarcoma, it is unnecessary to remove, as in carcinoma, the neighbouring glands ; and, if these be obviously attacked, it is generally best to decline operative interference altogether.

Unfortunately, however, a mischievous practice has crept in of calling any acutely growing malignant tumour of uncertain origin a "sarcoma," and thus that word has acquired a very vague signification. In the breast, soft cell masses of encephaloid carcinoma are commonly so styled ; with these there is early axillary deposit, and the contents of the corresponding axilla need evacuation exactly as in the more chronic scirrhus, although the glands often do not exhibit much actual increase in bulk. On section they are grey, soft, pulpy, friable. The true sarcoma here is generally yellowish, its cut surface is fibrillated, parts may be composed of well-organised fibrous tissue. The two species may generally be differentiated by the naked eye, with, of course, an appeal to the microscope later on. On the appearances disclosed by an incision immediately after removal do the further measures of operative procedure depend.

Symptoms of *marrow-infection* by breast carcinoma, particularly that which consists in a slowly-advancing *prominence of the sternum at its junction with the 2nd costal cartilages*,

necessarily indicate that amputation of the mamma can be palliative only.*

IV.—Palliative Operations.

As a general rule it is unwise to attempt the excision of a malignant growth unless the whole of the palpable tumour can be removed; and unless there is good reason to anticipate prompt union of the wound. Cancerous parenchyma cut into, or otherwise irritated, will, as is well known, subsequently grow with greatly enhanced rapidity. Transgressions of this wholesome rule are largely accountable for the popular disfavour into which the surgery of cancer has fallen. The cases in which operative treatment is resorted to should be carefully selected, and there should be no indiscriminate resort to "the knife."

Valid exceptions, however, exist. The suffering by pain and starvation which tongue-epithelioma ultimately involves inculcate the extirpation of the organ at all hazards, even when some fragments must of necessity be left. And sometimes there is such imminent risk of death from repeated hæmorrhage, in the case of tumours elsewhere, that it is wise to attempt their partial removal.

Under all such circumstances, however, it will be well to eschew "the knife" for two reasons; one, that the patient is often very weak and cannot sustain the loss of blood which any cutting operation would involve; the other, that *burning*

* I have elsewhere described this condition as the "Sternal symptom." My discovery that the cells of mammary carcinoma ordinarily gain access to and flourish insidiously in the marrow of bones was first announced in *The Re-appearance of Cancer*, 1890, the symptomatology and mechanism of infection being subsequently worked out in papers read at the meetings of the British Medical Association in 1890, 1891, and 1892. Of these researches, a resumé will be found in *Cancers and the Cancer Process*. Their significance has probably escaped fuller attention in consequence of the prominence given in current medical literature to the illusive quest for a cancer micro-parasite.

cancerous parenchyma checks its development, instead of accelerating it. Even if the resulting wound does not heal, a chronic excavated ulcer will follow ; not the exuberant fungous protuberance commonly seen after a measure of the former class. Thus, ablation of the tongue is effected without hæmorrhage, shock, or risk by the galvanic écraseur. In other parts a fungous bleeding mass may be shaved off, with much benefit to the patient, by the same instrument, or by Paquelin's thermo-cautery.

V.—Chemical Escharotics.

Caustic applications in cancer are, of course, the great stronghold of quacks, who thus trade upon the fears of the timid. In carcinoma and the more severe forms of malignant disease they necessarily cause far more pain and shock than the usual methods of treatment. They cannot, moreover, be had recourse to by the conscientious practitioner, on account of the principle pointed out at the commencement of this paper. It is the metastatic deposits in lymph glands, and deeper tissues, that constitute the real *crux* of cancer surgery ; we cannot apply chemical escharotics to deeply-seated glands.

In small superficial lesions, which are not associated with lymph-gland infection, such remedies are not absolutely barred, and may even possess distinct advantages, for in chronic epitheliomata, or rodent ulcers, they often answer admirably. The best is the stick potassa fusa, which acts rapidly and thoroughly, and whose operation may be instantaneously checked by contact with *water*. There is no subsequent pain or shock ; the more fashionable zinc chloride is, however, conspicuous for the severe suffering which its use involves. Sometimes strong sulphuric acid in charcoal (or with asbestos, as in the notorious Michel's paste), may be resorted to for the purpose of destroying bleeding fungous granulations, but is apt to run over and injure the healthy parts. Its work can

generally be done much better with Paquelin's cautery. "Pastes" of every kind are an abomination, slow, uncertain, painful, dangerous. The surgeon who has tried the potassa fusa will not seek any other caustic treatment for cancer.

VI.—Medicinal Treatment.

Making certain local exceptions, which must needs occur to every one, the golden rule in cancer not amenable to cure by surgical eradication, is *to initiate at the earliest moment the administration of opium or morphia* in small, continued, gradually-increased doses. The patient with an incurable malignant tumour should thus become permanently subject to the morphia habit, purposely induced. The drug should be given with the avowed object of arresting and keeping in check the progress of the lesion.*

The benefits of this principle are most evident in connection with carcinoma in the female breast, though by no means limited to this. If we are able to get the patient well under the influence of opium before ulceration has taken place, and the case be not of acute type, we commonly see the organ pass into that "atrophic," shrivelled condition of almost stationary disease, which causes no suffering, and is compatible with many years of comfortable existence. In uterine cancer, of which ulceration is a feature *ab initio*, considerable prolongation of life is effected, but not to so marked an extent as in the breast.

---

* In the matter of medical treatment, the attitude of many orthodox practitioners towards cancer—"operate, or failing this, do nothing"—besides being commonly unwarranted by the facts, naturally urges resort to the quack. On the *rationale* of that here indicated, see my *Palliative Treatment of Incurable Cancer.*

In that of surgical measures, popular disbelief in their validity is well illustrated by a remark I recently heard publicly enunciated by an eminent dignitary of the Established Church, that "who once has cancer always has cancer." He who considers the local origin in a minute cell-area, of every cancerous disease, with the mechanism of subsequent diffusion thence to other parts, will "fail to recognise the necessity."

The practice of withholding opium until compelled by pain to resort to its use, merits unmeasured condemnation from every point of view. Careful tending is imperative, undue exertion should be avoided; an ulcer should never be permitted to become covered by an unsightly scab, or to emit an offensive smell; rest in bed should be encouraged. A patient who has been operated upon should, if possible, be kept under observation for at least two years subsequently. In any such believed to be liable to "recurrence," and particularly in women who display the peculiar physical signs of marrow-infection, treatment on the above plan should be instituted immediately after recovery.

Humanly speaking, the path of improvement which I have here attempted imperfectly to indicate, would seem at present to lie far more in the better use of weapons long ready to our hand, than in the discovery of new. No one can pretend that the former have hitherto been employed in other than the most feeble and half-hearted fashion. With organs amenable to the resources of surgery, the grand desideratum of perfect eradication, is a prompt recognition of the first beginnings, insidious and almost imperceptible, commonly long painless, of cancer.

In the light of modern pathological science, the term "cancer-curer," eschewed by the older surgeons as one of opprobrium, becomes a title of honour to be aimed at by all.

6, Gloucester Place, Portman Square.

July, 1893.

MORTON & BURT,
Printers,
187, Edgware Road,
W.